

**To:** Jones, Samantha[Jones.Samantha@epa.gov]; Thayer, Kris[thayer.kris@epa.gov]; Bahadori, Tina[Bahadori.Tina@epa.gov]; Lavoie, Emma[Lavoie.Emma@epa.gov]; D'Amico, Louis[DAmico.Louis@epa.gov]  
**From:** Bussard, David  
**Sent:** Thur 3/23/2017 1:00:54 AM  
**Subject:** Fwd: pthalates and cancer: is the relevance of rat mononuclear cell leukemia's a key issue with pthalates as to whether they potentially cause cancer in humans?  
[Nature of the dose MNCL.docx](#)  
[ATT00001.htm](#)  
[MNCL specific agenda.docx](#)  
[ATT00002.htm](#)  
[MNCL info with subheadings.docx](#)  
[ATT00003.htm](#)  
[02.04.15 DINP draft.docx](#)  
[ATT00004.htm](#)  
[BBP Draft with updated template May 2016.docx](#)  
[ATT00005.htm](#)

## Ex. 5 - Deliberative Process

David Bussard  
Sent from my iPhone

Begin forwarded message:

**From:** "Walker, Teneille" <Walker.Teneille@epa.gov>  
**To:** "Euling, Susan" <Euling.Susan@epa.gov>, "Bussard, David" <Bussard.David@epa.gov>  
**Cc:** "Vulimiri, Suryanarayana" <Vulimiri.Sury@epa.gov>  
**Subject:** Re: pthalates and cancer: is the relevance of rat mononuclear cell leukemia's a key issue with pthalates as to whether they potentially cause cancer in humans?

Hi all,

## Ex. 5 - Deliberative Process

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**From:** Euling, Susan  
**Sent:** Monday, March 20, 2017 12:43 PM  
**To:** Bussard, David  
**Cc:** Walker, Teneille; Vulimiri, Suryanarayana  
**Subject:** RE: pthalates and cancer: is the relevance of rat mononuclear cell leukemia's a key issue with pthalates as to whether they potentially cause cancer in humans?

## Ex. 5 - Deliberative Process

**From:** Bussard, David  
**Sent:** Monday, March 20, 2017 10:48 AM  
**To:** Euling, Susan <[Euling.Susan@epa.gov](mailto:Euling.Susan@epa.gov)>  
**Subject:** pthalates and cancer: is the relevance of rat mononuclear cell leukemia's a key issue with pthalates as to whether they potentially cause cancer in humans?

Sue,

I've mostly heard you and others here discussing the developmental effects of phthalates.

As we are reviewing our decision re perc compared with CalEPA's, Sury noted an article (Caldwell 1999) re the mononuclear cell tumor response in F344 rats and notes the issue arises with at least some phthalates. Is that an issue that EPA is, or has, evaluated in its work on phthalates?

David

**From:** Bussard, David  
**Sent:** Monday, March 20, 2017 10:24 AM  
**To:** Vulimiri, Suryanarayana <[Vulimiri.Sury@epa.gov](mailto:Vulimiri.Sury@epa.gov)>; Birchfield, Norman  
<[Birchfield.Norman@epa.gov](mailto:Birchfield.Norman@epa.gov)>  
**Subject:** RE: perc

Sury,

Thanks!

I totally agree with some edits or points to clarify.

## Ex. 5 - Deliberative Process

I appreciate the check on my understanding. I look forward to your check of this version.

Can you do that?

David

**From:** Vulimiri, Suryanarayana  
**Sent:** Thursday, March 16, 2017 5:12 PM  
**To:** Bussard, David <[Bussard.David@epa.gov](mailto:Bussard.David@epa.gov)>; Birchfield, Norman <[Birchfield.Norman@epa.gov](mailto:Birchfield.Norman@epa.gov)>  
**Subject:** RE: perc

Hi David,

Here is Caldwell's reference. I made few edits on your text and have few comments. I pulled out some info from the Cal EPA OEHHA's report and pasted into one word file for you to look at regarding their arguments. Also including the Cal EPA OEHHA report. In the meanwhile I will go over the text looking for their arguments and will send you the summary, may be tomorrow. At least this keeps the ball rolling.

With best regards,

Sury

**Sury Vulimiri, Ph.D., DABT** National Center for Environmental Assessment, Office of Research & Development, US EPA. Phone: 919-541-3558 | Fax: 919-541-0245 | [vulimiri.sury@epa.gov](mailto:vulimiri.sury@epa.gov)

**From:** Bussard, David  
**Sent:** Thursday, March 16, 2017 3:34 PM  
**To:** Vulimiri, Suryanarayana <[Vulimiri.Sury@epa.gov](mailto:Vulimiri.Sury@epa.gov)>; Birchfield, Norman <[Birchfield.Norman@epa.gov](mailto:Birchfield.Norman@epa.gov)>  
**Subject:** perc

Sury,

Your bullets were really helpful.

I tried putting them into my own words a bit. See if you think that muddled anything.

I also took a shot at the PBPK issue. Take a look.

David A. Bussard

Director, Washington Division

National Center for Environmental Assessment (NCEA)

Office of Research and Development, USEPA